

High Mountain Dams in Upalco Unit,
Clements Lake Dam
Ashley National Forest
6.5 miles north of Miners Gulch Campground
~~Hanna Vicinity~~ MOUNTAIN HOME VICINITY
Duchesne County
Utah

HAER No. UT-42-C

HAER
UTAH,
T-MOHON,
I-C-

PHOTOGRAPHS

WRITTEN HISTORIC AND DESCRIPTIVE DATA

Historic American Engineering Record
Rocky Mountain Regional Office
National Park Service
U.S. Department of the Interior
P.O. Box 25287
Denver, Colorado 80537

HISTORIC AMERICAN ENGINEERING RECORD

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High Mountain Dams in Upalco Unit, Clements Lake Dam

HAER No. UT-42-C

Location: 6.5 miles north of Miners Gulch Campground, Ashley National Forest
Hanna-veinity, Duchesne County, Utah
MOUNTAIN HOME VICINITY
UTM: 12.534920.4497280
Quad: Sweep Creek

Date of Construction: 1926

Builder/Designer: Dry Gulch Irrigation Company

Present Owner: Moon Lake Water Users Association, Roosevelt, Utah 84066

Original Use: Dam

Present Use: Dam

Significance: The largest of the Brown Duck Basin dams, the Clements Lake Dam is a representative, though undistinguished, example of clay core/earth fill technology found in the Upalco Unit. Its principal significance derives from its association with the Dry Gulch Irrigation Company. With by far the most extensive network of canals and laterals, Dry Gulch was the largest and most important irrigation company in the Uinta Basin. The company impounded five lakes in the Uintah Unit of the Central Utah Project, but Clements Lake is the only Dry Gulch reservoir in the Lake Fork drainage. As such, it is an integral component of an historically important irrigation system.

Inventoried by: Clayton Fraser and James Jurale
Fraserdesign
Loveland, Colorado

October 21, 1985

HISTORICAL INFORMATION

Located at an elevation of 10,440 feet, approximately 3-1/2 miles north of Brown Duck Lake, Clements Lake is the highest of the four Lake Fork River reservoirs and is located closest to the headwaters of the watershed in the Brown Duck Basin. The lake draws from a densely forested drainage of 1,273 acres. In 1921, the Forest Service granted the Dry Gulch Irrigation Company a special use permit to impound water for irrigation on the lake. Later that year, the company built a small log dam across the lake's natural outlet on its east side, to prove up on the water. In 1926, Dry Gulch employed Louis Galloway to survey the dam site and blaze a pack trail from the trailhead at Moon Lake. Using equipment packed on horseback, the Dry Gulch crew built the dam that year. With a crest length of 680 feet, the Clements Lake Dam is the longest in the basin. It displays typical clay core-earth fill construction, with its upstream face covered with a single layer of flat stones and the lower face with stone riprap. It is proposed that the dam be breached, a spillway formed at its center, and the outlet pipe blocked to lower the lake to its natural level.

ARCHITECTURAL INFORMATION

Dam length: 680 feet
Dam height: 13 feet
Dam width: 8 feet
Construct: Earth fill dam with stone riprap facing
Lake size: 80.5 acres; 649 acre-foot maximum capacity; 10 vertical feet maximum drawdown
Outlet: 18" pipe with inclined gate; concrete spillway

BIOGRAPHICAL INFORMATION

"Preliminary Engineering Report: Stabilization of High Mountain Lakes, Upalco Unit," National Forest Service Report, 1970, page 10.

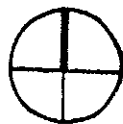
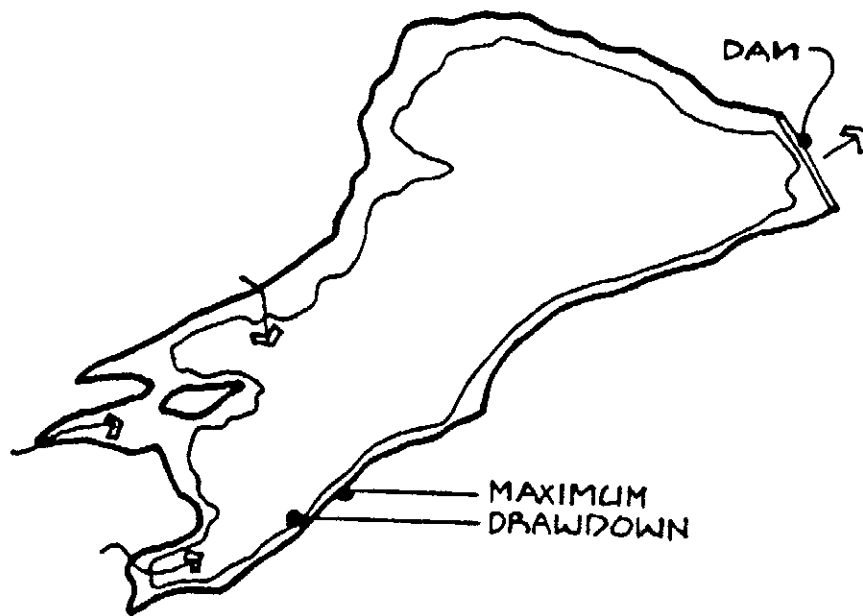
William F. Gettleman, "Report on the Lakes and Reservoir of the Headwaters of the Uintah, Whiterocks and Lakefork Rivers, Uintah Project, Utah; February 1932," page 18.

Clements Lake Reservoir File #5153, Roosevelt District Ranger Office, Ashley National Forest, Roosevelt, Utah.

Field inspection by Clayton Fraser, July 22, 1985.

For additional information, see Irrigation Canals in the Uinta Basin, HAER No. UT-30.

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SCALE : 1" = 1200'